

ABSTRACT

The present invention consists of a main artery stent (the main stent) that is placed in the main artery and a second stent that is placed into the side branch (the side branch stent), the two stents constituting a complete treatment for a stenosed arterial bifurcation. Both stents are preferably drug eluting. The main stent would optimally be one that has a reasonably small area of each cell after the stent is deployed, but also has a large perimeter length for each cell. The stent delivery system for the side branch stent has an attached main guide wire tube that can be advanced over a main guide wire and a central lumen that is advanced over a guide wire placed into the side branch. The structure of the side branch stent delivery system allows the side branch stent to achieve the correct angular orientation and longitudinal position when it is advanced over the two guide wires.